

DECEMBER
1953

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Amateur Radio

JOURNAL OF
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VK7WI: Sundays, at 1000 hours EST, on 7146 Kc. and 146.5 Mc. No frequency checks are available.

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EDITORIAL



LOOKING BACK

December being the twelfth and last month of the year is usually a period of great activity and festivity.

December is also usually recognised as a suitable time for "looking back" over the activities, achievements and disappointments of the year.

Looking back upon the year's activities in Hamdom, we are pleased to note the increasing interest in field work and the R.D. Contest. We record the success of the Coronation Relay.

Amongst our achievements we count the privilege of sixteen-year-olds to sit for the A.O.C.P. examination and the technically minded to sit for Limited A.O.C.P. examination; however we must record amongst our disappointments the tardiness of officialdom in completing

the machinery necessary to give full effect to these achievements.

Probably our greatest disappointment is our failure to disassociate, in the official mind, the vexatious problem presented by Commercial "Telecasting" from the humble but nevertheless worthwhile contribution to technical progress which could be achieved by the Amateur Experimenter.

Having looked back and recorded our successes and our failures, 'tis time to put away our cares and join in the festivities knowing full well that what has not been achieved in 1953 must be attempted with greater determination in 1954.

So till then fellow Hams, a Merry Christmas and a happy respite from your labours.

FEDERAL EXECUTIVE

THE CONTENTS . . .

The S/N-6 Cascode 2 Metre Pre-Amplifier	2
Amateur Television—Part Five	5
Amateur Call Signs	9
Prediction Chart for December	9
Ross A. Hull Memorial V.H.F. Contest, 1953	10
Fifty Megacycles and Above	11
Hints and Kinks	11
DX Activity by VK3AHH	13
Federal, QSL, and Divisional Notes	15
Correspondence	20
Index to Volume 21—1953	20

The S/N-6 Cascode 2 Metre Pre-Amplifier.

THE S/N-6 Cascode 2 Metre Pre-Amplifier is entirely self contained (except power supply) in a 3" x 4" x 5" metal box. All parts mount directly on the rear of the front panel so that construction is easy and straightforward. The 6BK7 and 6AK5 r.f. tubes are mounted horizontally on the front panel. Co-axial fittings are used for the r.f. input and output connections. All tuning adjustments of the coils are made from the front of the panel.

The plate voltage required for the two tubes is low—150 volts d.c.—and can be taken off the communications receiver. Filament voltage required is 6.3 volts a.c. or d.c. at 0.625 amperes.

DESIGN CONSIDERATIONS

Many 2 metre converters and receivers, today, lack two important features which are necessary for DX work at this frequency. These two features are (1) high signal-to-noise ratio (low noise figure); (2) gain. Of these two, high signal-to-noise ratio is the most important. An amplifier could increase the signal-to-noise ratio nothing would be achieved—that is, you would notice an increase in signal level, but at the same time the noise level would be increased proportionally.

The opposite case would be an amplifier with a high signal-to-noise ratio with no increase in gain. This would be a decided advantage over the first amplifier in that the signal would appear louder to the ear, however, the S meter would show no increase in signal level. These two amplifiers are exaggerated cases, since fortunately practically all r.f. amplifiers improve the signal-to-noise ratio to a certain extent and give an increase in gain.

In the design of the S/N-6, the above two features were deemed to be of utmost importance. Since the first stage of any r.f. amplifier, receiver, or converter is the most important from a signal-to-noise ratio standpoint, it was given careful design consideration. The cascode circuit was chosen because if properly designed it will produce a high signal-to-noise ratio. A pentode could be used in this circuit for high gain, however, it would produce more noise because of the current division at the screen grid. Therefore, the low-noise twin triode type 6BK7, particularly designed for cascode circuits, was chosen.

The selection of a triode was not too difficult. At first a pentode connected 6AK5 feeding a pentode connected 6AK5 in a cascode circuit was calculated for signal-to-noise ratio. Under optimum conditions this calculated to be approximately 9 db (noise figure) which was good but still too high. Then a type 6BK7 cascode feeding another 6BK7 cascode was calculated and the over-all signal-to-noise ratio was approximately 5 db (noise figure). This was considered to be very good so the original design was started.

After the circuit was designed on paper a laboratory model was constructed. This model had a tendency to break into

• Many Amateurs will remember the popular "R9-er" pre-amplifier, of a few years back, well here is a recently developed version for 2 metres, which will help to drag in those weak 2 metre DX stations. The 6BK7 twin triode is difficult to obtain, but it should be possible to use types available in Australia with some sacrifice in performance. Later on, the 6BK7 may be available and could then be substituted.

One word of caution—the circuit constants and layout must be followed faithfully.

Fig. 2 was considered the best and simplest for construction.

Another feature considered and incorporated was to make the front end broadband. This is very desirable for this band, since it eliminates the necessity for retuning when going from one end of the 2 metre band to the other. Also the output impedance was made adjustable so that a proper match could be made to the receiver. This is important since any mismatch to the receiver may tend to decrease the signal-to-noise ratio.

CIRCUIT DETAILS

Refer to the schematic circuit diagram shown in Fig. 1. The cascode section of the unit, which consists of both triode sections of the 6BK7, is of the parallel d.c. type. This type of circuit has the advantage over the series type circuit, in that a lower plate supply voltage is required and the heater-cathode voltage is lower.

The input circuit has been designed to accommodate either a 70 ohm or 300 ohm unbalanced line. For 70 ohm input, jack J1 is connected as shown. For 300 ohm input, the centre pin of J1 is connected to the junction of C1 and L1 as indicated by the dotted lines. Capacitors C1 and C2 and inductance L1 together with the attached antenna form a broadband input network to cover the entire two metre band. Once L1 is adjusted for the centre of the band no further adjustments are necessary.

oscillation. Therefore, two other models were constructed with different layouts to overcome this condition. Each of these models still showed the tendency to break into oscillation. Methods were devised to eliminate the oscillations, but it was felt they were too difficult for the average Amateur to duplicate. A pentode connected 6AK5 was then considered for the second stage to replace the second 6BK7. This combination, 6BK7-6AK5, calculated to 6 db (noise figure) under optimum conditions. Three models were constructed, each with a slightly different layout. None of the layouts were unstable, however, the one shown in

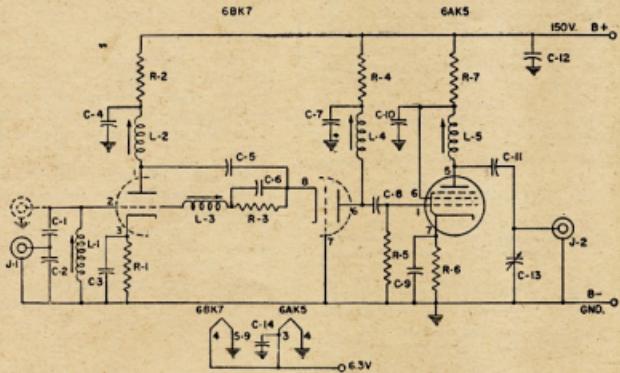


Fig. 1.—Circuit diagram of the S/N-6 Pre-Amplifier.

C1 C2—15 pF. zero temperature, tubular ceramic.

C3, C4, C5, C6, C7, C8, C12—1,000 pF. high-K tubular ceramic.

C9, C10, C14—1,000 pF. high-K disc ceramic.

C11—25 pF. zero temperature tubular ceramic.

C13—120 pF. mica compression pad.

R1, R3—56 ohms, $\frac{1}{2}$ watt.

R2, R4—220 ohms, 1 watt.

R5—2,400 ohms, $\frac{1}{2}$ watt.

R6—180 ohms, $\frac{1}{2}$ watt.

R7—2,700 ohms, 1 watt.

L1, L2, L4—Three turns No. 24 enamel wire, spaced diameter of wire, on $\frac{1}{4}$ inch diam. former.

L3—Six turns No. 24 enamel wire, spaced diameter of wire, on $\frac{1}{4}$ inch diam. former.

L5—Two turns No. 24 enamel wire, spaced diameter of wire, on $\frac{1}{4}$ inch diam. former.

J1, J2—co-ax jacks.

6BK7 socket—9-pin miniature.

6AK5 socket—7-pin miniature.

Note.—All resistors and capacitors $\pm 20\%$ tolerance unless specified otherwise.

The plate circuit of the first triode section of the 6BK7 consists of L2, C4, C5 and R2. Capacitor C4 and Resistor R2 form a decoupling network for the supply voltage. The inductance L2 is of primary importance in that it has a decided bearing on the signal-to-noise ratio. If it is replaced by an r.f. choke, the signal-to-noise ratio may be very low. Inductance L2 tunes fairly broad, but it should be adjusted for the centre of the band by spreading the coil.

Capacitor C5 feeds the signal into the cathode of the second triode section of the 6BK7. Part of this signal is fed through L3, the neutralising inductance, which forms a parallel resonant circuit with the grid-to-plate capacitance of the first triode section. This effectively tunes out the grid-to-plate capacitance which is necessary for high signal-to-noise ratio and good stability.

The second triode section of the 6BK7 is operated as a grounded grid stage. Bias voltage for this section is obtained by the cathode current flowing through R3. Capacitor C6 effectively bypasses the r.f. around this bias resistor. The plate circuit of this section incorporates another decoupling network R4 and C7. It is also tuned to resonance at the centre of the band by coil adjustment.

The final stage consists of a type 6AK5 operating as a pentode. The input to this stage is conventional. The plate circuit utilises another decoupling network formed by resistor R7 and capacitor C10. Incorporated, also, is an impedance matching network formed by inductance L5, capacitors C11 and C13. Inductance L5 is adjusted to resonance at the centre of the band, then with the receiver connected to J2, variable capacitor C13 is adjusted for the loudest signal.

Capacitors C1, C2, C11 and C13 should be of the value and type specified. The other condensers specified can either be of the tubular type or disc type. It is highly recommended the tubular type be used, with the exception of those used in by-passing the 6AK5 to facilitate short and direct connections.

CONSTRUCTION DETAILS

It is recommended that the mechanical layout shown in Fig. 2 be followed faithfully. This layout was found to be the best from an electrical and mechanical standpoint.

The S/N-6 is constructed on a 3" x 4" x 5" box with removable front and back panels. All of the components are mounted on the back of the front panel. Before mounting the components, all of the black crackle paint should be removed. This is very important to insure good ground connections. Also the lip of the box, to which the front panel attaches, should be cleaned of all paint to further insure a good ground connection.

Dimensions are given in Fig. 2 for locating the various holes. No dimensions are given for the socket holes or input and output jack. These will depend on the type the builder uses.

As will be noted, coils L1, L2 and L3 are in line with the input jack J1 and are mounted close to the socket. Coil

L4 is mounted above and to the right of the 6BK7 socket with coil L5 mounted to the right of the 6AK5 socket. If the dimensions outlined in Fig. 2 are followed, the coils will mount close to the sockets permitting short and direct connections. In winding the coils, leave approximately one inch of wire at the ends for soldering.

The power plug can either be mounted on the side of the box or on the rear panel. This is left up to the discretion of the builder as its location is not critical.

WIRING DETAILS

In wiring the S/N-6, the work will be much easier if a small-tip soldering iron is used. The capacitors and resistors are compactly grouped around the socket which makes the soldering operation a little difficult if a large-tip iron is used.

The 6AK5 socket is wired in the conventional manner using short direct connections. Soldering lugs placed at the socket mounting holes are used as ground tie-points.

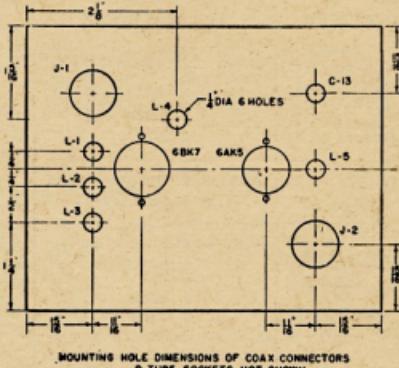


Fig. 2.—Panel layout of the S/N-6 Pre-Amplifier (back elevation).

ALIGNMENT

The alignment procedure is straightforward and simple to perform. The output of the pre-amplifier should be connected to the antenna terminals of the receiver by a short piece of cable. The cable should not be over twelve inches long and must be shielded to avoid picking up extraneous signals.

With the receiver tuned to 146 megacycles, a signal of this frequency should be fed into the antenna input (either 70 ohm or 300 ohm input). This signal can be obtained from a signal generator, transmitter, or a fairly loud signal from another Amateur station can be used. If the last two methods are used, the signal should be close to the centre of the band.

With the signal fed into the input, capacitor C13 and inductance L5 should be adjusted for maximum signal. Next

the inductance L4 should be adjusted for maximum signal. L2 is adjusted next in the same manner, followed by the adjustment of L1. In adjusting L1 and L2, it will be found that they tune quite broad. Next, the neutralising inductance L3 should be adjusted for maximum signal. This may be tricky if the inductance of L3 is too high. In this case, there will be a tendency to oscillate, with a large increase in signal just before oscillation starts. This condition will also cause the amplifier to have a rather narrow bandwidth. So check the bandwidth if you suspect L3 is wrong.

After the above procedure has been followed, it should be repeated and the inductances realigned if necessary.

Once the above alignment procedure has been completed, no further adjustments are necessary while operating your receiver.

OPERATING INFORMATION

To coin an old expression, "the receiver is no better than the antenna," applies equally well here. Use a good antenna, and one with the proper im-

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Type 31—Input: 18v. 12a., Output: 7.2v. 13a., 225v. 110 Ma., £1/19/6.

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5—6J6

2—2D21

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Transceiver £15/-/- } if supplied separately.
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1K7	10/6	813	60/-
2A3	15/-	VR150/30	22/6
6AC7	15/-	954	7/11
6B8	15/-	955	7/11
6F6	12/6	12A6	12/6
2051	22/6	2050, 22/6.	This valve is suitable for use with Photo
6KG6	12/6	6KG6	Circle Relay Unit, as per June, 1953, issue of "Radio and Hobbies."
6K8	12/6	6K8	
6L7	12/6	6L7	
807	25/-	807	

COMMAND

RECEIVERS

Type BC453, 190 to 550 Kc., £12/10/-.
BC454, 3 to 6 Mc., £7/10/-.
BC455, 6 to 9.1 Mc., £7/10/-.

TRANSMITTERS

Type BC457, 4 to 5.3 Mc., £7/10/-.
BC458, 5.3 to 7 Mc., £7/10/-.
BC459, 7 to 9.1 Mc., £7/10/-.

COMMAND RECEIVER CONTROLS, Type BC450

3—Slow Motion Dials.
6—Single Pole Double Throw Switches.
4—Miniature Jacks.
3—Volume Controls, approx. 500 ohms.

Price, £1/15/-

Post. & Pack.: 6/-, Interstate 8/6.

COMMAND MODULATOR UNIT, Type BC456E

In new condition, contains:
1—12J35
1—1625
1—VR150/30
3—24v. Relays
Price, £3/10/-

TRANSMITTERS Type TR3548

Containing Valves: 1 Rectifier VU111, 1 EF50, 1 10 Cm. Magnetron Valve complete with magnet, 1 Crystal Diode Type IN21; and 1 24 volt Blower Motor. Brand new. Price £5/19/6.

MODULATING UNIT

Type 169, containing Klystron Tube, three Neon Stabilisers, one EF50, two half-wave Selenium Rectifiers, one 5U4 Rectifier, one CV85, Potentiometers, gears, Resistors, high voltage Condensers and Transformer. Price £4/19/6.

BENDIX RADIO AZIMUTH CIRCLE LOOP AERIAL CONTROLS, Type MN22A

Price 35/-.
Post. & Pack.: 4/9, Interstate 6/-.

AMATEUR TELEVISION

PART FIVE

TROUBLES

The results obtained from the equipment described in the previous four parts were very encouraging, and indicated that it would be worth the trouble to re-build certain items, to overcome minor defects, and to incorporate interlaced scanning.

The troubles experienced were as follows:-

1. Sync. Signal Generator:

- (a) Subject to r.f. interference.
- (b) Vertical sync. waveform such as to cause poor horizontal sync. separation.
- (c) Not electrically locked to the 50 cycle mains.

2. Mixer:

- (a) Somewhat temperamental, and subject to a 30 c.p.m. motor-boating, after an instantaneous overload.

- (b) High peaking beyond the required bandwidth, allowing undue amplification of noise, causing "snow."

3. Receiver:

- (a) Excessive gain.
- (b) Unreliable sync. separation.

4. Flying Spot Scanner:

Insufficient horizontal sweep, with linearity only fair.

SYNC. SIGNAL GENERATOR

The equipment is used within a thousand feet of a 660 foot vertical radiator, radiating 10 kw. at 560 Kc., resulting in a colossal field strength in the middle of the video bandwidth. While it could be reduced to negligible proportions in the video amplifiers, it occasionally caused trouble in the sync. generator.

The frequency and amplitude of the output of the primary r.c. oscillator was caused to vary with transmitter modulation. The effect on the picture was for vertical edges to have moving waves throughout their length.

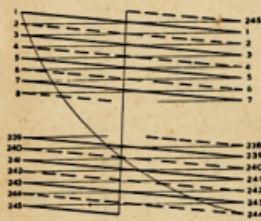


FIG. 24 - INTERLACED RASTER

The sync. trouble was manifest as a tendency for the bottom of the picture to tear out of sync. Non-locking to the mains allowed faint hum bands to be moving slowly, with an irritating effect.

I decided to minimise these defects, and at the same time to incorporate

interlaced scanning. New standards were therefore adopted for this feature—

1. 245 lines per frame.
2. 50 fields per second, 2 : 1 interlaced.
3. 25 frames per second.
4. C.c.i.f. type sync. waveform.

INTERLACED SCANNING

In interlacing, an odd number of lines per picture are used, and two vertical scans, or fields, are completed for each. Thus, the first field (1/50 sec.) scans odd lines 1, 3, 5 . . . 243, and half of 245; the second field scans half of 245, 2, 4, 6 . . . 244. The result is that even lines of the second field fall between the odd lines of the first field. See Fig. 24.

BY E. CORNELIUS,* VK6EC

On differentiation of this pulse train, a series of positive going pulses is provided as in Fig. 25f, to synchronise the line time base, the extra half line pulses being ignored easily by the time base.

In the new design sync. signal generator, the primary oscillator at 12,250 p.p.s. is a multivibrator, with three stages of frequency division (5, 7, 7) to 50 p.p.s., and division by 2 to 6125 p.p.s. for line frequency. An equalising multivibrator at 12,250 p.p.s. provides the leading edge of all sync. waveforms.

Line Blanking and Sync.

The line blanking pedestal is obtained by delaying a pulse by nearly a line

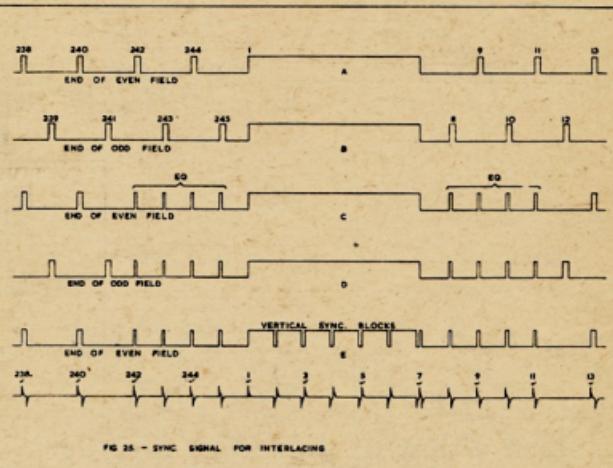


FIG. 25 - SYNC. SIGNAL FOR INTERLACING

To obtain this effect, the primary oscillator runs at twice line frequency, i.e. $12,250 \times 2 = 6,125$ —line frequency $\div 245 = 50$ —field frequency. This enables the field rate to be doubled, from 25 to 50 per second, reducing flicker without increase in bandwidth.

The sync. waveform, at the end of odd and even fields, differs, as seen in Figs. 25a and 25b. For odd fields line pulse 245 is much closer to the frame pulse, than line 244 pulse, on the even fields.

On sync. separation, the frame time base is likely to fire early on even fields, making line 2 closer to line 1 than to line 3. This is called "pairing" and is prevented by inserting equalising pulses, at twice line frequency, instead of line sync. pulses, before and after each frame pulse. See Figs. 25c and 25d.

To maintain horizontal line sync. during the frame pulse, this pulse is slotted, at twice line frequency, such that the trailing edge of the slot (positive going) corresponds in time to the leading edge of the equalising and sync. pulses. See Fig. 25e.

period. This pulse, at 6125 p.p.s. keys in every second equalising pulse, which triggers the line sync. multivibrator. See Fig. 26.

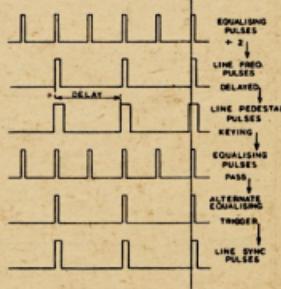


FIG. 26 - LINE SYNC & BLANKING GENERATION

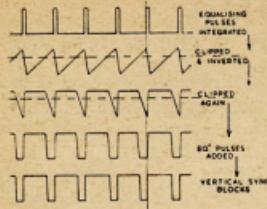


FIG 27 - VERTICAL SYNC BLOCK GENERATION

Frame Sync.

The frame sync. pulse is formed from equalising pulses, by integration and slicing, and making up the trailing edge of the slot by addition of equalising pulses.

Sync. Train Synthesis

Keying pulses, at 50 cycle rate, timed from an appropriate equalising pulse, and suitably delayed, are used for:-

1. Keying out 7 horizontal sync. pulses.
2. Keying in 14 equalising pulses.
3. Keying in 6 vertical sync. blocks. The composite sync. waveform is then clipped, and becomes a waveform, as in Fig. 25e, similar to the c.c.i.f. standard.

The 50 p.p.s. blanking waveform is compared with the 50 cycle mains in a discriminator, and feeds a correction signal back to the 12,250 p.p.s. master multivibrator for mains locking.

The sync. signal generator has eight outputs:-

1. Combined sync. for the video mixer.
2. Combined blanking for the video mixer.
3. 6125 p.p.s. driving pulses for the flying spot scanner.
4. 50 p.p.s. driving pulses for the flying spot scanner.
5. 6125 p.p.s. driving pulses for the picture monitor.
6. 50 p.p.s. driving pulses for the picture monitor.

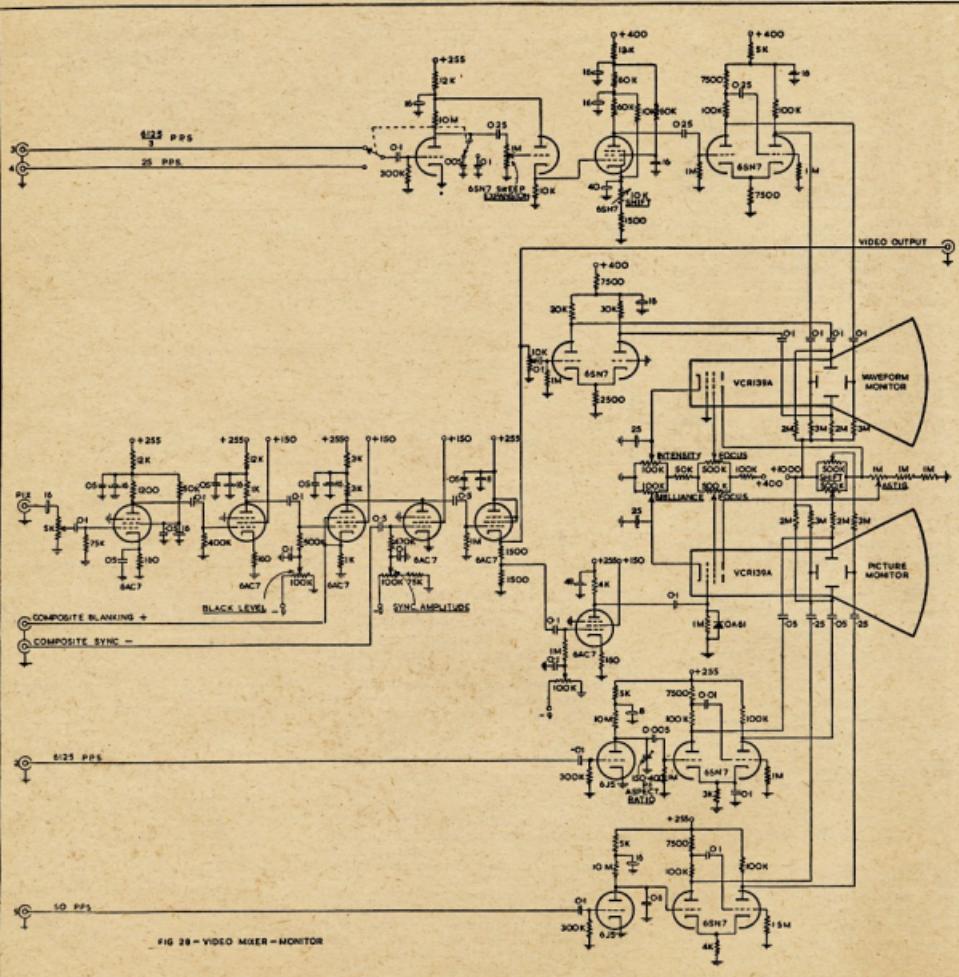


FIG 28 - VIDEO MIXER - MONITOR

7. $6125 \div 3$ p.p.s. driving pulses for the waveform monitor (line).
8. 25 p.p.s. driving pulses for the waveform monitor (frame).

VIDEO MIXER-MONITOR

The video mixer was simplified, and one tube removed, together with the phase inverter. High peaking was effected by choice of cathode by-pass of the first stage. This was as good as the circuit described in Part 4, but still gives over compensation at high frequencies, outside the 1 Mc. bandwidth, causing "snow."

Blanking is injected into the cathode of the third stage, and sync. into the grid of the fourth. Capacitive shunting of the cathode bias resistor of the third stage, by the blanking input cable, provides additional high peaking. Another amplifier tube was added to drive the grid of the picture monitor tube, in the monitoring section, associated with the mixer. See Fig. 28 for circuit of the combined unit.

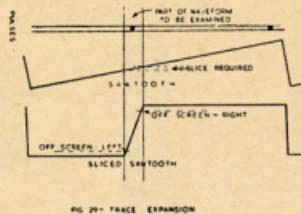
Picture and Waveform Monitor

This unit provides cathode ray tube monitoring of the transmitted picture, and of the video waveform, at 1/3 line and 1/2 field rate. Two VCR139A cathode ray tubes are used, mounted side by side. The picture monitor tube time bases are directly driven from the sync. generator. Video modulation is applied to the grid, from the mixer section, with an OA61 diode for d.c. restoration.

Horizontal deflection of the waveform monitor is obtained at 1/3 line, and 1/2 field rate, from a time base driven by

pulses from the sync. generator, with a switch for frequency selection. The video waveform is displayed vertically.

To examine the vertical sync. waveform, embracing 7 lines, considerable expansion of the horizontal trace is required, of the order of 30 to 50 screen diameters. A circuit has been devised, possibly not original, to accomplish this expansion, together with trace shift of the same order.



The circuit selects a slice of the horizontal sawtooth, and amplifies this slice. In this way, the c.r.t. spot is arrested just off screen until the selected slice of the sawtooth is reached, then travels rapidly across the screen, displaying the selected part of the complete cycle, and is arrested again just off screen, until flyback. See Fig. 29. The width of the slice, and its position can be varied. This gives "expansion" and "shift" facilities.

Using this circuit, the deflection amplifiers do not have to provide a deflec-

tion voltage in excess of say 1½ screen diameters, thus ensuring a stationary spot well off screen. By altering the part of the sawtooth where the slice is taken, effective shift of the display is obtained, independently of the deflection amplifier and deflection plate mean potentials.

The circuit as shown is very satisfactory for its purpose, but if adapted for general oscillographic work, would need some further experiment, as there is considerable interaction between trace expansion and trace shift, and linearity of the part displayed is rather poor.

RECEIVER

The receiver video amplifier gain was far greater than necessary, so the first stage was removed. This changed the polarity required at the input, and enabled the phase inverter of the video mixer to be recovered also. The vertical time base frequency had to be changed, from 25 to 50 p.p.s. and this improved the vertical linearity considerably.

A worthwhile improvement in synchronism, on the new type sync. waveform was immediately apparent, and the picture remains locked, over a far wider range of signal inputs, than is permissible for an acceptable picture. Some pairing was evident, causing an apparent 122 line picture, but improvement in the vertical sync. separator has overcome this. The sync. separator now uses three 6SH7 tubes, resulting in a vertical sync. output of a short duration negative going pulse of constant amplitude and width.

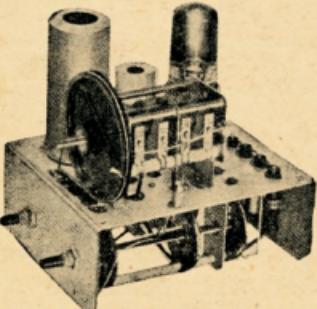
(Continued on Page 9)

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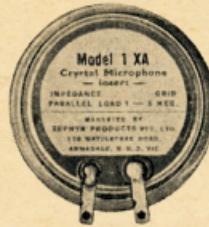
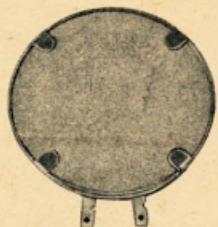
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- Precision engineering ensures realistic reproduction and high output with long life and dependable operation.

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- Good high frequency response ensures excellent speech reproduction.
- Aluminium diaphragm mechanically protected and frequency controlled by "Zephyrfil" filter.
- Australian made throughout.
- Only carefully selected cements used throughout, to suit Australian climatic conditions.

TECHNICAL DETAILS

Rochelle salt crystal microphones are perhaps the most widely used for all types of service where quality speech and music reproduction at high output levels is a requirement. They are dependable in performance and when fitted with the appropriate "Zephyrfil" filter, their frequency response may be adjusted to suit any application or requirement.

This crystal microphone requires to be terminated with a high value parallel load of the order of 1 to 5 megohms for best results.

The mass of the moving parts is small, hence the sensitivity is high and a high efficiency is achieved. Light gauge solder lugs are provided so that excessive heat in soldering will not be transmitted to the crystal element.

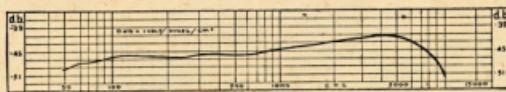
When mounted in a microphone cage, it is recommended that the insert be suspended in rubber, to eliminate shock and vibration.

One of the connecting lugs is directly connected to the case and care should be taken to solder the metal shield of the microphone cable to this solder lug, keeping the unscreened portion of the centre conductor as short as possible to eliminate hum pick-up.

All crystal elements are mounted on high grade suspension pillars being fixed thereto with a good quality cement, thus ensuring stability and long life.

Case 1 1/2" diameter (rear), 3/8" thickness, 1-13/16" overall diameter (front) with filter fitted.

Frequency Response = 60-6,500 c.p.s.
Output Level = -45 db (0 db = 1 volt/dyne/cm²)
Impedance = Model 1XA Grid 1 — 5 megohms.



Approximate Frequency Response Curve

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AMATEUR TELEVISION

(Continued from Page 7)

FLYING SPOT SCANNER

The deflection sensitivity of the VCR112 is very different on the X and Y plates. I found it hard to drive horizontally at 6125 p.p.s. By interchanging the X and Y axes, and rotating the unit axially through 90 degrees, I could then drive the insensitive plates at 50 p.p.s., and the high frequency sawtooth then gave sufficient raster width, with better linearity, on the more sensitive pair of plates. The vertical time base discharge capacitor was reduced to 0.25 μ F for the 50 p.p.s. sawtooth.

EPILOGUE

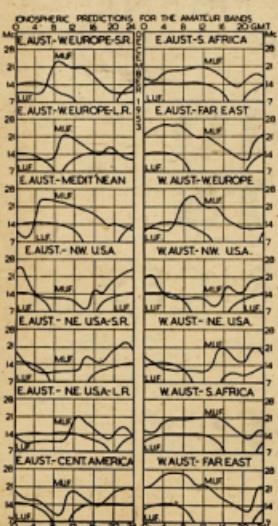
The equipment described now uses a total of 94 tubes, which may seem a hard way of obtaining a mediocre result. But the equipment as it stands may readily be converted to 625 lines, with minimum of alteration. The present limitation is the resolution of the flying spot scanner tube.

In Part I, I stated that commercial camera tubes were not available. I now find that an English firm will supply slightly flawed miniature camera tubes, to bona fide experimenters, at a reduction from £135 to £25 sterling. Deflection yoke, focus and alignment coils, etc., come to an additional £35 sterling. This is still a costly item, but may be within the reach of some Amateurs.

I hope that this series has interested some of my readers in the practical side of Television, and possibly encouraged a few to try their hand in this field. If I can amplify some points on which I have been obscure, or help in any way, please write, and I will do my best.

The End.

PREDICTION CHART FOR DEC., 1953



AMATEUR CALL SIGNS FOR MONTH OF OCTOBER, 1953

ADDITIONS

VK—
2ANB—R. J. Baty, "Sheelocote" 25 Shell Cove Road, Neutral Bay, N.S.W.
2AUD—K. E. McDonald, Station: 15 Lombard St., Balgowlah; Postal: 456 (M) Sqn. W.T. Section, R.A.A.F., Richmond, N.S.W.

Victoria

2ADZ—G. E. Delahoy, Eden Park Road, Whitemes.

3AKZ—K. H. Head, 3 Annadale St., Kew, E.4.
3APB—B. P. A. Beresford, 141 Albion St., East Brunswick.

3AZA—A. A. B. Slight, R.A.A.F. School of Radio, Ballarat.

Queensland

4IM—J. D. MacLean, No. 2 Holman Land, Kanangra, N.S.W.
4OV—D. V. Ahnfeldt, 34 Railway Ave., Mt Isa.

4UJ—P. L. Dubois, Thursday Island.

Western Australia

6KL—H. Leaver, The Homestead, Byford.

6SF—J. C. Watson, Station: Mobile on board M.V. "Silver Fin"; Postal: 12 Bernard St., Claremont. (This entry appeared as VK4SF in the September List and should now be deleted.)

ALTERATIONS

VK—
New South Wales
2AU—"Glen Shee," Little Hartley, Kanimbla Valley.

2MB—21 Darling Street, Redfern.

2QW—12 Francis Street, Homebush.

2RI—R.A.A.F. Transmitting Station, Londonderry.

2UN—6 St. Inverell, Inverell; Postal: P.O. Box 138, Inverell.

2UP—32 Moore Street, Harbord.

2YJ—35 Woodlands Avenue, New Lambton.

2YK—23 Victoria Street, Strathfield.

2AF—40 Victoria Street, Paddington.

2AF—34 Ruskin Street, Birkenhead Bay.

2AZ—11 Gray Street, Goulburn.

2AJD—47 Lindfield Avenue, Lindfield.

2AJM—Inverallan Avenue, Pymble.

2AMK—Postal Address: P.O. Box 32, Hornsby.

2AQK—Station: No. 6 "Keeling," 42 Victoria Parade, Manly.

2AQB—31 Farnell Street, Gladesville.

2AKB—2 Bedford Street, Wollongong.

2AQZ—297 Wentworth Street, Leichhardt North.

2AR—Lot 174 Alexander St., Wallsend North.

2ARY—1 Wyndham Street, Alexandria, Sydney.

2ASB—202A Flat, 12 Howes Crescent, Ainslie, Canberra.

2ATA—Flat 4, 124 Alison Road, Randwick.

2AWP—"Wandoona," Moree.

Victoria

3BL—613 Mair Street, Ballarat.

3EY—341 Mt. Alexander Road, Ascot Vale.

3FP—393 St. Georges Road, Thornbury.

3J7—87 York Street, South Melbourne.

3NZ—229 Elizabeth Street, Prahran, 299 Toorak Road, South Yarra, S.E.1.

3XI—Princes Highway, Warrnambool.

3YA—10 Belgrave Avenue, Glenroy.

3AKB—Leonard Street, Belmont, Geelong.

3ABW—Postal Address: Leonard St., Belmont, Geelong.

3ADD—23 View Street, Auburn.

3AJI—The Cavendish, 409 Burwood Rd., Hawthorn.

3AOB—16 High Street, Shepparton.

3AOG—Windson Road, Boronia.

3ASC—Station: 104 St. Heller St., Heidelberg.

Postal: 25 Faraday Street, Carlton.

3ATP—10 Poultier Street, Asburton.

Queensland

4JR—9a Cintra Street, Eastern Heights, Ipswich.

4SM—221 McLeod Street, Cairns.

South Australia

5CH—14 Dandaloo Place, Mount Gambier.

5GW—Station: 14 Second Ave., Sefton Park.

5LF—Postal: 22 Grassmere Rd., Prospect.

5SL—Postal: 2 Olive Ave., Westbourne Park.

Station: Mobile on board S.S. "Tyalla" (C.O. A.S.B. Bond St., Newcastle, 2.N.W. N.S.W.).

5LK—10 Valmai Avenue, Kings Park.

5LX—Portable: 10 Valmai Ave., Kings Park.

5SE—2000 2nd Floor, Paddington, N.T.

5TG—51 Linden Ave., Hazelwood Park.

5ZO—19 Harrow Road, St. Peters.

Western Australia

6BY—C.O. 120 Canning Highway, South Perth.

6CK—C.O. Flying Doctor Service Control Station, Meekatharra.

6DF—20 Walker Avenue, West Perth.

6EJ—Station: Property of Collins & Co., 9 miles north of Bencubbin; Postal: C/o. Post Office, Bencubbin.

Territories

9DS—Lae, T.N.G.
9RM—Bulolo, T.N.G.
9WL—Chabai, via Sohano, Bouganville, T.N.G.

DELETIONS

New South Wales: VK2, 2AN, 2DS, 2FS, 2IS, 2JK, 2ME, 2TH, 2TG, 2ZA (now operating under VK2AGN); 2AN, 2DS, 2FS, 2IS, 2JK, 2ME, 2TG, 2ZA (now operating under VK3APB); 2ADJ, 2AFH, 2AZH, 2AJN, 2ANZ, 2ASD, 2ATT, 2AWR.

Victoria: VK8, 3HU, 3NP, 3NV (now operating under VK2AGN); 3OP, 3QX, 3VT, 3WJ, 3AFI, 3AGK, 3AGZ, 3ATM.

Queensland: VK1, 3AF, 3AS, 4DF, 4GI (now operating under VK2AGN); 3AT, 3AFI, 3AJN (now operating under VK3AGN); 4KT, 4TW.

South Australia: VK5, 5CP, 5RY.

Western Australia: VK6, 6BL, 6BQ (now operating under VK5SFE); 6DU, 6RG, 6WD.

Tasmania: VK5JT.

Territories: VK1AE.

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Ross A. Hull Memorial V.H.F. Contest, 1953

RULES

1. The Contest will take place in the 50-54 Mc. band and will commence at 0001 hours E.A.S.T. on 19th December, 1953, and will continue until 2359 hours E.A.S.T., 3rd January, 1954.

2. Points may only be claimed for contacts outside the competitor's own call area.

3. Only one contact with any one station per twenty-four hours commencing midnight E.A.S.T. to count as a scoring contact.

4. Exchange of a serial number will constitute a contact.

5. The serial number of five or six figures will be made up of the RS (telephony) or RST (telegraphy) reports plus three figures which may commence with any number between 001 and 100 for the first contact and which must increase in value by one for each successive contact, e.g., if the number chosen for the first contact is 050, then the number for the second contact must be 051, for the third 052, and so on. If any contestant reaches 999, then he will start again 001 and continue.

6. Scores will be calculated on a points basis as shown in the table appended.

7. Logs should contain the following information: Date, time (E.A.S.T.), call of station contacted, serial number sent, serial number received, points claimed for the contact, and at the foot of each page, total points claimed, and at the end the grand total. Logs should be

signed by the competitor, together with a declaration to the effect that the station was operated strictly in accordance with the Rules and spirit of the Contest and that the decision of the Federal Contest Committee shall be final and binding. Logs must be received by the Federal Contest Committee, Box 1734, G.P.O., Sydney, not later than the 24th February, 1954.

8. Entries will be accepted from all States of the Commonwealth and Districts of New Zealand. Check logs from other countries will be appreciated by the Contest Committee.

9. For the purposes of scoring, Northern Territory will count as a separate call area, VK9 will be considered as a

State of the Commonwealth, and VK1 (if any activity) as a separate country.

10. The decision of the Federal Contest Committee will be final and binding upon all matters pertaining to this Contest.

11. The regulations governing the control of Amateur Radio in each contestant's country must be observed.

12. **Awards.** The outright winner of the Contest within the Commonwealth of Australia will receive an appropriately inscribed certificate and, in addition, if a financial member of the W.I.A., will hold the Ross A. Hull Memorial Trophy for one year.

The highest scorer in each call area in Australia and New Zealand will be awarded a certificate. In addition, the Federal Contest Committee will have the right to make any additional awards.

	VK2	VK3	VK4	VK5	VK6	VK7	N.T.	VK9	ZL1	ZL2	ZL3	ZL4	Other Countries
VK2	-	5	4	2	10	4	6	10	7	7	7	7	20
VK3	5	-	4	4	9	10	6	11	7	7	7	7	20
VK4	4	4	-	5	11	7	3	7	7	8	8	8	20
VK5	2	4	5	-	7	5	3	10	8	8	8	8	20
VK6	10	9	11	7	-	10	12	14	17	17	17	17	20
VK7	4	10	7	5	10	-	7	12	7	7	7	7	20
N.T.	6	6	3	3	12	7	-	3	15	15	15	15	20
VK9	10	11	7	10	14	12	3	-	12	13	14	15	20
ZL1	7	7	7	8	17	7	15	12	-	4	2	3	20
ZL2	7	7	8	8	17	7	15	13	4	-	4	3	20
ZL3	7	7	8	8	17	7	15	14	2	4	-	4	20
ZL4	7	7	8	8	17	7	15	15	3	3	4	-	20
Other Countries	20	20	20	20	20	20	20	20	20	20	20	20	—

To obtain points per contact, look down the column of your call area until you come to the line of the State contacted. The figure where the two lines intersect is the points score for that contact. For example, VK5 works VK4—points score is 5.



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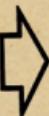
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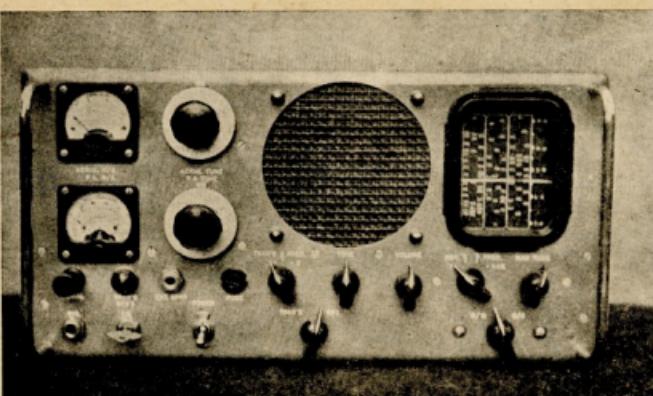
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FEDERAL, QSL, and



DIVISIONAL NOTES

FEDERAL

Fed. President: G. Glover, VK3AG.

Fed. Secretary: G. M. Hull, VK3ZS, Box 2611W, G.P.O., Melbourne.

QSL Bureau: R. E. Jones, VK3RJ, 23 Landale Street, Box Hill, E.11, Vic.

DX. C.C. Manager: G. L. Morris, 50 Eighth Street, Parkdale, Vic.

NEW SOUTH WALES

President: Jim Corbin, VK2YC.

Secretary: David H. Duff, VK3EO, Box 1734, G.P.O., Sydney.

Meeting Night: Fourth Friday of each month at Entertainment House, Corner Gloucester and Essex Sts, Sydney.

Divisional Sub-Editor: Harry Powell, VK2AYP, 9 Russell Avenue, Wahroonga.

QSL Bureau: J. B. Corbin, VK2YC, 78 Maloney St, Eastlake, Sydney (Inwards and Outwards).

Zone Correspondents: North Coast and Tablelands: Noel Hanson, VK2AHH, Ryan Ave, West Kempsey; Newcastle: Ron McI. Sturrock, VK2HJ, 18 St. Stephens Rd, Callala; Central and Lakes: Harry Hawkins, VK3VJ, 27 Comfort Ave, Cessnock; Western: W. H. Stitt, VK3WH, Cambewarra, Forbes; South Coast and Southern: Roy Raynor, VK3ED, 42 Petrie St, Wollongong; Central: K. K. VK3NO, 42 Yanko Ave, Waverley; Northern Suburbs: Harry Powell, VK2AYP, Russell Ave, Wahroonga; St George: Chas. Coyle, VK3YK, 84 Carlton Cres, Kogarah Bay.

FEDERAL

AMATEUR CALL SIGN BOOK

Progress with the preliminary work for the publication early next year of the Australian Amateur Call Sign Book—for which the W.L.A. has been granted the copyright—under the terms of a public tender—have progressed very satisfactorily.

Advertising copy is rolling in and design work has commenced on a "snappy" proposed design for the front cover—something appropriate to Ham Radio and call signs. This design will not necessarily be the one used, so if you fellows have any ideas, now is the time to type them in, as there is an opportunity to submit your idea. It need not be expertly drawn so long as the idea is clear; we can have our artist lock it into professional shape. Forward your rough sketch or what have you direct to the Federal Secretary, Box 2611W, G.P.O., Melbourne, C.I.

ANOTHER HAM GOES TO HEARD ISLAND

There's no doubt about it! Despite oft heard "brass hat" criticism that Amateurs are a dying race, and that in the modern electronic era, it still seems to be the desire that an Amateur fill many an important Government post—in fact you will find them in top positions all over every section of the radio and electronic field. The Committee has now no say in the world over.

Yet another Ham goes to the Antarctic as an official radio operator and communications man. This time it's George Delaboy, VK3ADZ. George leaves for Heard Island somewhere about the 10th January, 1954, and will be taking his own 100W rig with him for operation on the 7 and 14 Mc. bands on phone and c.w.

He will be looking for contacts everywhere in the world, but particularly back home in VK Australia. Give him a shout boys if you hear him on the air.

OPERATING TECHNIQUE

Currently appearing in several overseas magazines are some interesting points for operating which would be useful for our VK Amateurs to emulate, judging by some of the poor procedures occasionally noticed on the bands. Thank goodness the minority only come within this category.

LISTEN on your frequency for five minutes before putting your station on the air. That way you will know if there is any side of any QSOs which may be in progress. If your frequency is thus engaged, then shift to a frequency not in use. Outside of contests, this can usually be found. The result will be a QRM, with a joy. This goes for you, licensed in 1912; especially you licensed in 1933. AND ME!

VICTORIA

President: G. Dennis, VK3ST.

Secretary: G. Gibson, VK3EF.

Administrative Secretary: Mrs. G. Pickering, Law Court Chambers, 181 Queen St, Melbourne.

Meeting Night: First Wednesday of each month at the Radio School, Melb. Technical College.

Divisional Sub-Editor: K. E. Pincock, VK3AFJ, 14 Dunscombe Ave, Asburton, S.E.11.

QSL Bureau: Inwards—Graham Roper, VK3ZB, 21 Lucas St, South Caulfield, Vic. Outwards

—Peter O'Dwyer, VK3OF, 199 Thomas St, Hampton, S.E. Vic.

Zone Correspondents: Western: T. B. Rodda, VK3ATR, Box 254, Warracknabeal, South Western: W. H. Stitt, 11 St. Stephens St, Warragamba, and E. Giddings, VK3ANG, 2 Neales St, Warrnambool; North Eastern: A. D. Buchanan, VK3FD, "Booroorool", Warrning; Far North Western: M. Folie, VK3GZ, 101 Lemon Ave, Mundubbera; Central: G. Dwyer, VK3SG, and John Battwick, North Western: C. Case, VK3ACE, Cumming Ave, Birchip.

QUEENSLAND

President: J. A. Weddell, VK4PT.

Secretary: V. P. Green, VK4VX, Box 638J, G.P.O., Brisbane.

Meeting Night: First Friday in each month at the Royal Geographical Society Rooms, Ann Street, City.

Divisional Sub-Editor: J. T. Hope, VK4XL, Royal Parade, St. John's Wood, Ashgrove.

QSL Bureau: Jack Files, VK4JF, Vanda St, Buranda, South Brisbane (Inwards and Outwards).

LOW PERCENTAGE B.C.I. AND T.V.I.

FROM G-LAND HAMS

A recent document released by the British Post Office, entitled "Radio Interference Data," brings out some rather interesting facts relating to interference to Televiewers and Broadcast Listeners by Amateur Stations. Of 47,153 cases of b.c.i. and t.v.i. interference, 80% were found to be due to Amateurs. Of 32,611 investigated complaints of t.v.i., in 424 instances only were Amateurs involved. This is an astoundingly low percentage, but from a source to whom so much blame attaches by those who state it is granted that if an Amateur state his case in the vicinity, then it must be the cause of any kind of interference experienced. It is a credit to the Amateurs to state that they kept the incidence of both forms of interference at such a low level; it should be an inspiration and a guidance to the Australian Amateur when his time comes. It should be a directive to those responsible for the design of equipment now to the obviously high percentage of other forms of electrical interference—it'll save more than a few headaches later on.

DX C.C. APPLICANTS PLEASE NOTE!

Applicants for DX C.C. and those members forwarding additional cards are requested to sort their cards into alphabetical order of Countries and not call signs.

A list set out in the same order is also required showing the following details: Country, Call, Date, Phone or C.W. Frequency.

Applications should be addressed to VK3EJ, G. I. Morris, 50 Eighth St., Parkdale, S.E.11, Vic.

FEDERAL QSL BUREAU

RAY JONES, VK3RJ, MANAGER

Alan VK3VY overhauled the TX and RX in preparation for 48 hours' solid operating during the recent "CQ" Contest. Expect that the petro and dieselene for the power units will be him hard for a few shillings, but maybe it was worth while.

VK5WZ, with QTH as Manus Island, currently heard on 14 Mc. c.w.

Bob VK2ZAR, ex-VK1EM, has at long last obtained his cards from a tatty printer and will spend the balance of November making them out and mailing them. 'Tis rumoured that Roy ex-VK1RJ has already issued his, and now stands in the lead. Roy, by the way, needs Roy ex-VK1RJ to get busy with his and then the 1952 Macquarie bunch will be in the clear.

Treb BERS105 states that up to date he has mailed 944 reports this year and received 453 reports of work involved in mailing out those reports and it's pleasing to see that it is not in vain.

Can anyone advise whether VK4JH, who operated from the North Borneo region around August 1946, is still in the land of the living and present QTH?

Lee C3BF gives QSL address as via WIWAY.

SOUTH AUSTRALIA

President: W. W. Parsons, VK3SP.

Secretary: R. G. Harris, VK3RR, Box 1234K, G.P.O., Adelaide. Telephone: J 1151.

Meeting Night: Second Tuesday of each month at 17 Waymouth St, Adelaide.

Divisional Sub-Editor: Mr. W. W. Parsons, VK3SP.

10 Victoria Avenue, Port Pirie. **QSL Bureau:** Geo Luxton, VK3SR, 8 Brook St, West Mitcham, South Aus. (Inwards and Outwards).

WESTERN AUSTRALIA

President: G. A. Moss, VK3GM.

Secretary: J. Mead, VK3LJ, Box N1002, G.P.O., Perth.

Meeting Place: Perth Technical College Annex, Mounts Bay Road, Perth.

Meeting Night: Third Tuesday of the month.

Divisional Sub-Editor: Mr. G. A. Moss, VK3AG.

QSL Bureau: Jim Rumble, VK3RU, Box F319, Perth, West. Aus. (Inwards and Outwards).

TASMANIA

President: L. E. Edwards, VK3VLE.

Secretary: F. J. Evans, VK3TFJ, Box 371B, G.P.O., Hobart.

Meeting Night: First Wednesday of each month at the W.L.A. Club Room, 147 Liverpool Street, Hobart.

Divisional Sub-Editor: L. E. Edwards, VK3VLE.

QSL Bureau: Inwards—T. Allen, VK3AL, 6 Thirza St, New Town; Outwards—Ray Calvert, VK3RC, 100 Argyle St, New Town.

Zone Correspondents: Northern: Mr. A. Chaplin, VK3CA, 36 Merallin Rd, Launceston; North Western: K. R. Wilson, 11 Cunningham St, Burnie, Tasmania.

NEW SOUTH WALES

The October meeting of the N.S.W. Division was held in fine weather and 92 members were present to hear Mr. George Duff, VK3D, of the Wireless Branch, talk on the P.M.G. Requirements, the problem of B.C.I. and the Advisory Committee. Mr. Riley was deputising for Mr. T. E. Armstrong who had been unexpectedly called away. Mr. Riley gave a brief history and a concise summary of how the three subjects affected the life of the Amateur. Mr. Riley spent the rest of nearly two hours answering the queries of the assembled Amateurs. At the end of that time this very enthusiastic vote of thanks was given to him after being moved by Mr. Calderwood 2DA.

As our lecturette, Vaughan Wilson demonstrated the effects of ionisation when transmitters were operating at high power and at very near the maximum working voltage. This illustrated a point of a previous lecture by Mr. Leo Medina of the C.S.I.R.O.

The meeting ended at 10.30 with the ensuing "raucous" after dinner being put out in the hall, continuing on the footpath, as usual, and so it was obvious that a good time was had by all.

The First South Western Zone Convention was held at Wagga on 11 November. It was a social and financial success and great credit is due to the organisers: Jim ZAO, Zone Officer, Coolamon; AH 2BW and Stan 2AD, of Wagga; Stewart 2PL, Griffith; Roy 2PN, Tumut; and Don 2RS, of Albury. A full report appears elsewhere in this issue.

NORTHERN SUBURBS ZONE

My apologies for missing out with last month's notes, but not having been on the bands much in that time, I could gather little news. Alan 2FH has been busy re-building the rig and experimenting with a WBJK beam on 20 and 40 m. It seems work DX that I heard him on. Haze 2AC and VK3ZAR are kept busy with Institute affairs and are responsible for the tape recording of our Sydney lectures; these recordings along with diagrams and other items are sent around the country branches and members are very enthusiastic about the scheme. Bob 2ARL is putting out quite a good signal from a difficult location. Well fellows, I will be on 20 and 40 m in the evenings from now on so how about connecting me with all the hot news from this zone—2AVG.

WESTERN SUBURBS

Activity is at a low at present owing to the poor conditions. Aub 2ABE, of Auburn, is on 21 Mc. and has a beam with telescopic elements for 20 and 40 m. The Fairlight and the Burwood Radio Club is at present going through the procedure of obtaining a call sign. A rig for 20 and 40 m is owned by the Club and needs only an antenna. The club holds a general meeting every second Tuesday night. For information, ring LB 5234 (work days) and ask for Barry.

decided to give it a miss were decidedly bad judges, because the talk was enjoyed by all, even by those whose interest in the v.h.f.s. is only slight. Mr. Mason discussed the beaten maps of the various countries, and the jargon of the v.h.f.s. in such a simple manner as to make it decidedly interesting to all members present. The intelligent type of question asked by members elicited the best of the talk, together with the genuine applause that greeted the vote of thanks proposed by Gordon 5XU was sufficient indication of the success of the efforts of Mr. Mason. This lecture was taken as the test lesson for the radio reading experiment and turned out a success so I am informed. When it has been edited it will be sent out to country members together with an explanatory paper describing the various parts of the lecture and it is hoped that this experiment will be worth while repeating as often as is possible, although this is entirely up to the country member.

The only important general business that was discussed at any length was that of the re-publication of the Government Tourist Bureau sending us another issue of QSL cards this year. The President advised members that Jim SFO had seen the Director of the Tourist Bureau and although this gave him no right to commit himself at that moment, he was optimistic as to the ultimate outcome. The matter of the Xmas Social and the Picnic in the New Year was also discussed and now all that remains is for the gang to do the right thing and both

Among the welcome visitors were Messrs. L. Elphick, K. Keely, L. Gabb, and Claude SCHA from Mount Gambier. To these gentlemen we say "please come see us and come again." The meeting closed at 10.30 pm on Saturday, and the lights were not put out until after 11 pm, which tells its own story.

SOUTH EAST AREAS

57W has returned from his holidays but as yet Tom has not found much time for radio, that is as a hobby I mean. 5CH also is not very active since he returned from his short visit to the city, he is decidedly busy around the house and is still finding time to catch up at times and Stewart is still chasing those elusive new countries. 5KU has had a few contacts on 20 and 40 mx, although Erg is not altogether satisfied with the results of the new beam as compared with those enjoyed by 5AU.

The two Johns, 5FD and 5JA are still in the land of the missing. 5CJ has been keeping the usual skeds and the rest of Colin's spare time has been taken up with preparing the amateur fire fighting equipment for the coming summer. Associate member Jack Fowler's eye is improving rapidly and he has also been busy on the E.F.S. gear.

It is the usual practice at this time of the year to call the members' attention to the coming Xmas Get-Together, which is only another way of describing the December general meeting of the club. You all know the idea by now, bring enough food for yourself, place it on the big table, and help yourself to a jolly time. The cost of the food; last year we took what was left over around to one of the orphan homes, but don't let that fact cause you to have any sponge cake or strawberries taken out of the parcels this year because I have chanced up my appetite during the year, and probably will have some mates in this regard. The liquid refreshment side of the evening will be taken care of by Council as will be the entertainment and so on that I can tell you enjoyed last year's Social, so come along again this year and repeat the dose.

Regarding the Picnic at the Gorge Recreation ground on January 22 1954, and that I can say is that it is primarily intended for the Xmas Social and the Harmonics, although the OM's will be catered for with tennis, swimming, cricket, and several contests not usually associated with Amateur Radio. I have been given to understand that the cricket will be played between the s.w. boys and the phone boys. Book for the bus early and don't forget to bring the family. This is your day, make it a day to be remembered by all.

PORT PIRIE AREA

Some months ago I received a little booklet from the Rev. Gutheber, VK5OD, which claimed to be the official organ of the Port Pirie Amateur Radio Society, which I believe was a means of getting some news for the magazine, but after reading the entire contents several times, I decided to wait for another edition, because possibly it was not that way possible. I arranged with the next edition, and then the next, I placed the matter in the hands of Council in an endeavour to find a way out of an embarrassing situation. All members of Council read "Wogs," as this peculiar booklet is titled, and were unanimous in their opinion

that it was impossible to even understand a word of it, let alone secure any items of news suitable for the magazine. I will now decide that with the editor, the Rev. Gutheber, succeeded in writing something which could be understood, then it could be printed.

After a long and patient wait, and acting upon the suggestion of the VK5OD Council, I am happy to quote from Volume Six—September 1953 which reached me on 21st October, the following: I quote: "The editor, moved by compassion, refers to an item contained in the last minutes of the Society when SEN was present, but he has not received a copy of 'Amateur Radio' for some time. If SEN receives same for the technical articles and other matter relevant to Amateur Radio contained therein, then he has something more substantial to offer if he desires in addition to the above to see some mention of the activities of the Port Pirie gang, then it would be advisable for him to forget the whole thing. Generally speaking, if you desire to read about unadulterated trips, then the section should be deleted. You will read all about the 'big shots' in the game, including the very tiring restoration of humbug between Doc and the French bloke, and the like. The section in the latest issue 'Very little business was transacted' (This refers to the last general meeting—Ed.) As a contribution to the Women's Magazine or Port Paper, one could give the article much praise, but if it is supposed to represent the activities of Amateur Radio in South Australia, then it is the most blatant form of bald-faced exposed to human vision possible. It is regrettable that place where guided missiles are disintegrated far away from human activity." Unquote.

Ignoring the mis-spelt words and a lack of necessary punctuation marks, something that I can't do, I think the Society, as I accept the criticism of the Rev. Gutheber or shall I call him "Guthy," because I have always maintained that if one is to be criticised, then it should be by a person who is a recognised expert in the field, I think the author of "Wogs," who is more fitted than "Guthy" to pass an authoritative opinion on "sheer unadulterated trip" and "blatant form of bald-faced exposed to human vision." Not wishing to descend to the standard of rudeness as practised by "Guthy," but rather working on the principle, familiar to him I know, of turning the other cheek, and that the meek shall inherit the earth, I say "Guthy" for at long last giving me something to write about

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INDEX TO VOLUME 21—1953

Ken. TWA has a fine piece of workmanship in a 15 mx beam which is all complete except for a motor to drive it and I believe he has been so good at TWA and VK3WI before, TKB has recently spent a great deal in constructing a new type of beam which is switched instead of rotated, but when the final tests were made the whole thing was a disappointment as the best results were obtained when the dipole alone and as directors and reflectors were added the signal just faded out. The monthly meeting was held at the home of yours truly (R. Wilson) where there was a great turn up of members and I think a lot of radar as applied to the last war. Supper was provided and everyone seemed to enjoy themselves.

CORRESPONDENCE

Editor "A.R." Dear Sir,

Your Editorial in October "Amateur Radio" asks who the Amateur is generally categorised as a radio maniac or wireless crank. If we could find the reason it would be easy to make the correction.

Mr. Fruin judges the Radio Amateur in two ways. First he hears him on the air and secondly he observes a neighbour who is an Amateur.

In listening to an Amateur transmission, he most often hears a lot of queer jargon—meaningless to him—because abbreviation introduced for speeding up Morse transmissions are used speech when often it would be quicker to use plain words (for example, "XW" is heard as "X wife" instead of wife), in some cases he hears continual repetition and humour which, although probably appreciated at the other end of the contact, sounds querulous to him.

The neighbour he observes is often an Amateur who spends as much as 99 per cent of his leisure time on his hobby. He hears via local gossip on the excessive time devoted by the Amateur to what is considered unusual going on the air and often notes the lack of other normal activities, such as gardening and sport by the Amateur.

Amateur Radio is a most absorbing hobby, so absorbing that it can easily become an obsession and in my opinion it is the Amateurs who have become obsessed with their hobby who have brought into use the terms "radio maniac" and "wireless crank."

—QSD."

HAMADS

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Advertisements under this heading will only be accepted from Institute Members who desire to dispose of equipment which is their own personal property. Copy must be received by 8th of the month, and remittance must accompany advertisements. Calculation of cost is based on an average of six words a line. Dealers'

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Mc. Rotary Beam Jul. p.2
Special Multi-Band Antenna May p.2
The "Gamma" Match Oct. p.3

AUDIO FREQUENCY EQUIPMENT AND DESIGN

A Mobile Modulator Apr. p.3
A Simple Low Level Audio Peak Clipper Oct. p.5
A Superb 30 Watt Modulator Jan. p.6
Diode F.M. Jan. p.5

CONTEST RESULTS

Ross A. Hull Memorial V.h.f. Contest, 1953, Results Jun. p.3
W.I.A. National Field Day, 1953, Results May p.5
1952 VK-ZL Contest Results Apr. p.15
1953 Remembrance Day Contest Result Nov.p.12

MEASUREMENTS AND TEST EQUIPMENT

A Beginners' Approach to the Calculation of Inductance Feb. p.2
A Crystal Controlled Service Oscillator Apr. p.5
A Standing Wave Indicator for 2/- Nov. p.5

Quarter Wave Matching Stubs' Impedance Calculations Jan. p.2
VK3WI Accurate Frequency Transmissions Feb. p.6

MISCELLANEOUS

Amateur Television:—
Part One Jul. p.4
Part Two Aug. p.5
Part Three Sep. p.5
Part Four Nov. p.6
Part Five Dec. p.5
Bring Your Regulations Handbook up to Date Jun. p.13

Hidden Xmitter Hunting—Why and Wherefore Mar. p.5
Hints and Kinks Sep. p.14
Hints and Kinks Nov.p.11
Hints and Kinks Dec.p.11
More Effective Utilisation of the Small Power Transformer Jun. p.4

Neutralising an R.F. Amplifier with the use of a Grid Dip Meter Mar. p.2

Series Connection of Rectifier Power Transformers Oct. p.7
Storing the Spare Resistors and Condensers Jan. p.7
Tank Circuits Q's Mar. p.3
Technograph Printed Circuits Sep. p.9
Why 47? Apr. p.6

RECEIVING

B.C. Converter for the S.W. Receiver Apr. p.4

Double Converting Disposals Receivers Jun. p.2

Notes on V.H.F. Converter Design Aug. p.2

Stabilising That I.F. Channel Jul. p.9

The S/N-6 Cascode 2 Metre Pre-Amplifier Dec. p.2

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Part Three Feb. p.4

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Carrier Control with Self-Biased Clamp Tube Modulator Apr. p.2

Design Data for use with Band-Switched Exciters Jul. p.8

Dual Grid Modulation Mar. p.2

Foolproof Antenna Tuning-Loading System Jan. p.2

Multi-Band Tuning Unit Oct. p.2

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